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ABSTRACT

Disadvantaged elementary school students can be taught to think critically as part of the process of learning to read. The key to student change is teacher knowledge. The purpose of this paper is to inform the development of powerful teaching strategies for reading instruction as used in Accelerated Schools. The Accelerated School is a transitional elementary school created for the purpose of bringing disadvantaged students to grade level performance by the end of grade 6. The paper is organized into the following sections: (1) the components of reading instruction; (2) the theoretical background of language development and thinking skills; (3) the implications of these theories for the instruction of "at-risk" students; (4) a model for lesson development based on Project READ; and (5) recommendations to assist teachers in creating "accelerated" readers. The appendices comprise a sample reading selection, "The Man On Top," and a description of Project READ. A list of 19 references is appended. (FMW)

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CENTER FOR EDUCATIONAL RESEARCH AT STANFORD
CERAS

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ABSTRACT

A disturbing pattern in contemporary test scores indicates that little progress is being made in teaching children to use critical thinking skills. This paper proposes that students can be taught to think critically as part of the process of learning to read. Beginning with the Accelerated School's premise that the key to student change is teacher knowledge, the rationale for critical thinking development through reading instruction is explored herein in both theory and practice. Special emphasis is placed on the instructional needs of the "at risk" student.

Reading Instruction in the Accelerated School

Background

The Accelerated School, as conceived by Levin (1987), is a transitional elementary school created for a singular purpose -- to bring disadvantaged students to grade level performance by the end of the 6th grade. This boost will allow them to fully benefit from secondary education. The Accelerated School is designed to provide clear instructional goals, advanced learning strategies, meaningful student assessment, and an accelerated curriculum (Levin, 1987).

Because reading is a key learning and thinking tool, it should play a primary role in the Accelerated School. The purpose of a good reading program is to help youngsters become literate individuals who understand the conventions of thinking and communication (Calfee & Drum, 1984). Reading can facilitate thinking. If taught as a process of critical thought, reading can provide the analytical foundation for a lifetime of learning experiences.

An accelerated literacy curriculum requires that learners possess more than the ability to think at the literal level. Students must also learn to draw conclusions and communicate successfully with others about the relationships they find among ideas. Unfortunately, a disturbing pattern in contemporary test scores indicates that little progress is being made in teaching children to use critical thinking skills (Applebee, Langer, & Mullis, 1986.) If a student can only "call" words and ferret

only superficial meaning from a text, he will become intellectually lost in the mid and upper elementary grades. "Such students enter school with achievement levels that are below those of their non-disadvantaged counterparts, and the disparity in achievement grows over the schooling experience" (Levin, 1987). Faced with this sense of helplessness, dropping out of school in later years becomes a very attractive option.

The sad fact that many elementary classroom environments are breeding grounds for drop outs is coupled with several other problems currently facing our public school system. First, many school-wide curriculums are so fragmented as to suggest that there is no plan at all. Students cannot be expected to learn with any degree of consistency when academic continuity between grade levels and among subject areas is lacking. Secondly, the materials for instruction provided to teachers are clearly inadequate. Schools are unlikely to foster informed curriculum decisions when teachers are bound to poorly written textbooks and standardized tests.

How to respond to these challenges? First, teachers can be furnished with the theoretical underpinning for understanding how to develop literate readers and thinkers. Next comes the training to translate these theories into practice in the areas of lesson planning, teaching and learning strategies, and text analysis. The end products are teachers who take charge of the learning process in their classrooms. Students are taught to think critically as part of the process of learning to read, and

they gain the skills to share their thoughts with clarity. Teachers see the big curriculum picture, a vision that translates into continuity in lesson planning and consistent expectations of students. Textbook materials become resources for the discriminating teacher rather than a driving force for mediocre instruction. Finally, standardized test results are supplemented by more diagnostic forms of ongoing assessment.

The belief that teacher knowledge is the means of student change is the key premise behind the adoption of an accelerated literacy curriculum. Accordingly, the purpose of this paper is to inform the development of powerful teaching strategies for reading instruction at the elementary level. The balance of this document is organized into five major segments. The first section defines the components that make up reading instruction. The second section presents a conceptual background in language development and thinking skills. The third section discusses the implications of these theories for the instruction of "at risk" students. The fourth section translates the theories into best practice; a theoretically based model of lesson planning for reading instruction. This exemplar offers strategies for developing critical readers. The fifth section closes out the chapter with specific recommendations for the adoption of an accelerated literacy curriculum.

It must be stressed that this paper represents a point of departure for beginning to construct a reading program within the Accelerated School. It is most definitely not the final word on

the subject of reading. Instead, it is intended to provide some thoughtful first words -- a foundation for developing a reading program that creates literate individuals, literate in the fullest sense of the word.

Components of Reading Instruction

Reading instruction can be grouped into three related components: decoding, vocabulary, and comprehension. Each component can be taught separately, but the true test of the proficient reader is the ability to integrate all three so that decoding and vocabulary automatically support the comprehension of material. The ultimate goal of reading is comprehension -- without proficient decoding and vocabulary understanding this goal is not reachable.

Decoding can be simply defined as "the skills and knowledge by which a reader translates printed words into speech ..." (Calfee & Drum, 1984, p.812). Phonics instruction fits squarely into the decoding component. In the past there has been much debate about how phonics should be taught and, in some cases, whether it should be taught at all. Some educators insist that phonics instruction is the key to proficient reading, while others claim that the dissection of words into their constituent sounds interferes with children's attempts to make meaning from text. After thirty years of debate there is substantial evidence pointing to the advantages of early phonics instruction (Calfee & Drum, 1984).

In their review of reading research, Calfee and Drum discuss

some of the major issues concerning phonics instruction. First, although a prime difference between poor readers and proficient readers is more fluent decoding skills on the part of the proficient readers, "the advantage of phonics training is typically small, and many students continue to experience comprehension problems, especially in the later grades" (Calfee & Drum, 1984, p.813). Phonics may help to provide a solid foundation for good reading, but it should not be the only component in beginning reading instruction. Teaching decoding skills in isolation from comprehension is a barrier to the acquisition of other reading skills.

"Reliance on rote drill and practice as the primary vehicle for decoding instruction is probably a mistake" (Calfee & Drum, 1984, p. 813). Rote drill and practice does not aid the reader in transferring skills to new reading situations. Furthermore, most of the drill and practice in classrooms occurs as independent seatwork in workbooks while the teacher is working with other students in a reading group. Anderson (1982) questions the learning outcomes of such practice when students lack any understanding of why they are doing the exercises.

Sensible phonics instruction should emphasize the morphophonemic nature of English spelling. The English spelling-sound system, although complex and somewhat idiosyncratic, contains more consistencies than inconsistencies. Contributions from the Anglo Saxon, Romance, and Greek languages make up three basic layers of English. If phonics instruction is based on

these layers, children will be able to grasp the consistent patterns and apply this knowledge as a tool in their reading and spelling.

The second major component of reading instruction is vocabulary development -- knowing the meaning of words. Learning a word "is determined in part by how it is related to experiences of the reader and to other words in the text" (Calfee & Drum, 1984, p.825). In addition, a word can be known at different levels. Whether a word is understood superficially or with subtlety is determined by the readers's ability to define and recognize its meaning in the context of a passage and the flexibility with which the word is used in conversation and writing. Research on vocabulary instruction tends to support "explicit training on strategies for handling words in general rather than training on a particular set of words" (Calfee & Drum, 1984, p.834). The best approaches teach students both words and ways of learning words as well.

Simply teaching words is not enough to develop better readers. There are a great many words in the English language, and no one teacher could possibly teach all the "important" ones. Also, the constraints of short term memory dictate that long lists of isolated words are soon forgotten once the weekly quiz is over. As a alternative, when vocabulary lessons are built around a central concept, students can develop precision in word definition and usage. The central concept might be the topic of instruction on a particular day or the central focus in a piece

of text. This approach to vocabulary instruction gives students an organized framework to scaffold their thinking. It assists students in their attempts to understand how new words are related to familiar ones. Most importantly, the new words become part of the learner's context for understanding the central concept, leading to increased comprehension.

The final component is comprehension, the real core of reading. Palincsar and Brown (1984) have organized comprehension into six major elements:

1. understanding the purposes of reading, both explicitly and implicitly.
2. activating relevant background knowledge.
3. allocating attention so that concentration can be focused on the major content at the expense of trivia.
4. evaluating content critically for internal consistency and compatibility with prior knowledge and common sense.
5. monitoring ongoing activities (to see if comprehension is occurring) by engaging in such activities as periodic review and self-interrogation.
6. drawing and testing inferences of many kinds, including interpretations, predictions, and conclusions.

For instructional purposes, comprehension can be broken down into two subcomponents, narrative and expository comprehension. Narratives have a different central purpose than expository passages. Narratives tell the reader a story, exposition provides the reader with information. Most students arrive at high school with little awareness of this distinction. Flood & Lapp (1986) show that most elementary school basal reading programs devote the bulk of their curriculums to narrative text, even though most high school textbooks are entirely exposition. Consequently, explicit training in the ways that narrative and expository text are different is a vital aspect of comprehension instruction.

Although most children come to school with the ability to tell a story, few can identify the elements that make up a well developed narrative. Given training in a few fundamental structures, young students can learn to identify the beginning, middle, and end of a narrative, develop a clear understanding of character and setting, and recognize the episodic nature of a story's plot. This structural awareness aids the reader in two ways. First, it provides a consistent framework for organizing and remembering information from a story. Second, the basic structures serve as a scaffold to support the young reader's introduction to more sophisticated literary concepts (i.e., theme, flashback, irony).

Comprehending expository text means more than remembering details from a passage. It also involves the ability to analyze information and make interpretive judgments based on this analysis (Curley, 1986). Many students lack the prerequisite skills for analysis and interpretation -- they cannot synthesize and integrate information from a text. Exposition is a foreign language to these students. Training readers to recognize the unique features of expository text is a first step in remediating their difficulties. Calfee and Chambliss (in press) have identified three different genres of expository purpose: description, sequence, and argument. Description presents the attributes of an object, sequence presents a progression of events over time, and argument presents support for an idea. When these text characteristics are taught explicitly, students

become capable of using specific text features (i.e., section headings, charts and graphs, italicized words) to identify the essential information in an expository passage.

A Theoretical Framework

This section of the chapter presents a theoretical base with implications for every aspect of the literacy curriculum. The theories themselves are culled from the fields of cognitive psychology and rhetoric. The special challenge of teaching the "at risk" child to read is taken up next, because the theories convey some especially powerful ideas about instruction for disadvantaged children.

Reading is Thinking! The reader is not a passive receptacle for the information in a text, but rather an active participant in the making of meaning (Bartlett, 1932). What active processes are taking place in the mind of the reader? Most obviously, some physiological activity is taking place (eye movements, for example). Beyond this sensorimotor activity, the reader is continually building a context for the information in a text as he reads. A context is created through the application of personal background knowledge to the new material. The reader engages in the process of making connections -- fitting the new information in with prior knowledge. This connecting process leads to critical thinking as perspectives are changed, conclusions are drawn, and motivations are understood. To look at an example, take a moment to read the following passage.... (Bransford & Johnson, 1972).

The procedure is actually quite simple. First, you arrange things into different groups. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step, otherwise you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once rather than too many. In the short run this may not seem important, but complications can easily arise. A mistake can be expensive as well. At first the whole procedure will seem complicated. Soon it will become just another facet of life. It is difficult to foresee any end to the necessity for this task in the immediate future, but then one never can tell. After the procedure is completed one arranges the materials into different groups again. Then, they will be used once more and the whole cycle will have to be repeated.

This selection doesn't make much sense by itself. The words are not difficult, but they probably don't add up to much, if any, meaning. Suppose that the title of this passage, "Doing the Laundry", is supplied. With this title in mind, go back and reread the passage. Notice the connections you are making this time around, presumably because doing the laundry is an activity well within the realm of your experience. Having a context to think within, in this case **laundry**, enables you as reader to connect your past experience with the topic to the information in the text. Meaning is made as you fit the text's information into your prior knowledge. Many student readers fail to comprehend the content they read in their classes because they do not connect the words on the page with their own prior knowledge. Without a context to think within, students feel like you did after your first reading of the laundry passage. The content just doesn't make much sense to them.

<u>The Natural/Formal Language Continuum</u>. This concept is an

important way of thinking about language: the Natural/Formal continuum (Freedman & Calfee, 1984; also see Heath, 1983; Scribner & Cole, 1978). All language acts, spoken or written, exist on a continuum between natural language and formal language. Natural language is highly implicit and invites interaction. The phrase "You know?" is a good example of these natural language qualities. This phrase uttered in a conversation between two friends could be completely meaningless to a bystander, but to the friends it is likely to be fraught with intuitive meaning and will serve as an invitation for further discussion.

Another quality of natural language is its tendency to be context bound. It is usually rooted in a particular place and time, probably due to its quality of immediacy. A father standing in line at a crowded supermarket who exclaims to his child, "You get over here now!" is providing a fine illustration of this natural language characteristic (as well as temporarily relieving the boredom of his fellow shoppers). In addition, natural language tends to be a uniquely personal means of expression. Anyone who has ever conversed with a small child can testify to their idiosyncratic way of using natural language.

Formal language, on the other hand, is highly explicit and more logical than intuitive. Much of the instructional language in content area classrooms falls into this category. Directions are spelled out, utterances are usually rule governed, and few details are left to the intuition of the listener (or reader).

Consequently, the context of a formal language act is less rooted in a particular time and place than is the case with natural language. Since more of the "message" is explicitly spelled out when formal language is used, the meaning remains constant regardless of setting. Imagine our same harried parent at the supermarket saying, "Ashley, I must insist that you vacate your position in front of the candy bar display within exactly six seconds and return to stand quietly next to me here in the overcrowded checkout line in this large supermarket in Northern California!", and you can see how a formal language act carries its own context. Precisely because of this explicitness, formal language tends to be memory supported and repeatable. The audience has more specific information to act upon in the making of prior knowledge connections. And so, if the message is coherently presented, there are fewer opportunities for misunderstandings between sender and receiver when formal language is used.

What implications does the natural/formal language distinction have for pedagogy? Almost every child comes to school with the ability to use natural language (Applebee, 1978). In order to succeed academically, students must become adept at understanding and using the formal language of classroom instruction. (This is not to suggest that we wish children's natural language abilities to disappear in the process of acquiring formal language competence.) This task can be accomplished in two ways. First, teachers can lead students to

an understanding of the ways that formal language is organized. Secondly, students can acquire a consistent technical vocabulary as a tool for talking about language. A focus on the development of organizational skills and an emphasis on technical vocabulary are pedagogical tactics that could benefit all teachers' repertoires.

The Importance of Organization for Thinking. The mind likes organization! Research in cognitive psychology suggests that the mind has a natural tendency to chunk information together when it is presented in meaningful units (Miller, 1956). Students are apt to see relationships among ideas when they can think within an organized framework. In addition, research into the nature of human memory tells us that students will remember more information when it is organized and recoded into short term memory. Miller compares this phenomena to the process of learning a telegraph code. Initially, the learner hears each telegraph sound as a separate chunk of information. Eventually, the separate sounds become organized into larger patterns and the learner finds himself capable of understanding and retaining more of the message.

For teaching purposes, the point is this: when new information is presented in an organized manner, it tends to be stored and retrieved in a similarly organized fashion. If you make clear connections among the ideas within the content you teach, your students will be able to understand and remember the larger relationships.

Other powerful methods exist to assist the memory process. One such method is the practice of focusing students' attention on one concept at a time. When students are allowed to concentrate on one topic or skill at a time they can master its complexities. When they are given a series of simultaneous directives (i.e., "Finish up yesterday's worksheet on the changes in Earth's climate, discuss the even numbered questions at the end of the environment chapter, and copy tomorrow's assignment on the solar system from the board. If you have any questions, see me.") their ability to see essential relationships will suffer, as will the teacher's ability to be explicit about expectations.

Another method that promotes the memory process has to do with verbal practice. Ideas that are talked about are more apt to be remembered than ideas that are simply listened to. (Lecturers take note!) Furthermore, many language researchers (notably James Britton and Jerome Bruner) tell us that children can internalize ways of thinking through oral practice at following the steps in the thinking process. Teachers can encourage oral interaction in their classrooms by asking questions that engage students in the practice of verbally following a line of reasoning. This verbal interaction with ideas should not only occur between teacher and student, but among students as well. The fund of background experience students bring to the classroom should not be neglected.

The use of visual structures to show relationships among ideas is another method for facilitating the memory process. A

variety of visual structures (i.e., semantic mapping, story graphs) can be employed to integrate student prior knowledge with information in a text. The act of constructing visual "pictures" to show relationships can be an extremely effective learning process, especially when students are the construction workers.

Contrast the implications of these three theories with a "traditional" reading lesson wherein the sole emphasis is placed on the content of a text. When students passively receive new information, they tend to learn isolated details. If they are not trained to see the connections among ideas in the text, they are less able to transfer information from one lesson to the next. In contrast, when students orally practice the process of organizing material into a visual structure, they remember more connected information and the transfer of knowledge and skills becomes a reality.

Reading and the "At Risk" Child

The classification "at risk" includes students with disadvantaged backgrounds, disciplinary problems, learning disabilities, lack of experience with the English language, and chronic absentee problems. It is useful to take an in-depth look at this population, for these students have the most to gain from effective reading instruction.

For many students who come from advantaged backgrounds, formal language thought starts to develop before schooling begins. Their parents and other adults talk with them and listen to them. These advantaged children come to kindergarten and

first grade knowing many "school words" and some of the conventions of formal thinking. In contrast, the child who has not been exposed to such early experiences finds school to be an alien environment. Not only are the words different, but the "rules" of communication are different, too. The disadvantaged child must grapple with a new way of speaking and a new way of thinking. His world has given him a natural way of using language and thinking but has not built a bridge to the formal language and thought processes used in school.

One common misconception about this group of low achievers is that they don't have much to say -- at least in the classroom. In reality, "at risk" students have a great deal of pertinent information to contribute, if their input is seen as useful knowledge by the teacher. All children, by virtue of their dealings with the world outside the classroom, have a good deal of information at their disposal. The teacher's challenge is to train students to relate this worldly experience to the classroom curriculum. Lessons that open an avenue for student contribution are tremendously successful in turning passive learners into active participants.

Developing "at risk" students' oral language skills can help build the bridge to formal language acquisition. Language researchers (e.g., Britton, 1970) have demonstrated that children can internalize ways of thinking through oral practice at following the steps in a problem-solving process. Led by the teacher's explicit modeling, students can learn to orally follow

the thinking processes of formal thought. Coupled with direct instruction in organizing information, this verbal ability helps the reader to think critically about the content of a text. Ideas that are talked through and organized are more apt to be remembered than ideas that are simply read off a page. Students' formal language thinking abilities improve as they learn to verbally follow the process of using visual structure to organize the information in a text. They learn to retain content and simultaneously internalize such critical skills as sequencing information, making comparisons and contrasts, and inferring cause and effect. In addition, the verbal practice with the processes of formal thought helps students to transfer these skills from one reading situation to the next.

The ability to use organizational patterns of language is especially relevant for children who come to school with little or no English in their language repertoire. These students, as much as any other "at risk" group, need to gain a sense of the structure of the English language. Their fluency gains are much quicker if the English language does not appear arbitrary to them. Part of this structural understanding comes from seeing the appropriate connections between English and their native language. A teacher of bilingual students can never make these connections too explicit. Again, the use of visual aids and oral discussion can greatly facilitate the process of learning how language is organized.

Developing the Accelerated Literacy Curriculum

The theories in the previous section of this report lead to the incorporation of several major instructional issues into the accelerated literacy curriculum. First, explicit directions must be provided to students to help them gain a clear understanding of the purpose of each learning activity. Second, oral discussions can facilitate the sharing of relevant student background knowledge and take advantage of "group intelligence" for the analysis of a text's content. Third, visual portrayal of the content is an important method for connecting pieces of information from a text together into a coherent organization. Finally, students should be led to internalize the processes for analysis as well as the content of a text itself.

The accompanying model for lesson development puts these concepts into practice. This theoretically based model was developed under the direction of Robert Calfee by Project READ at Stanford University. The project is an ongoing collaboration between researchers at Stanford and hundreds of public school teachers in all content areas, grades K through 12. The major goal of Project READ is to increase student literacy skills in reading, speaking, writing, and thinking (Calfee & Associates, 1981).

READ Lesson Model

Project READ lessons are organized into four clearly delineated segments: OPENING, MIDDLE, CLOSING, and FOLLOW-UP. Each segment reinforces not only content, but the organization of

this content and the process students use to organize the content into an appropriate visual structure. The lesson model is presented below in this format. Each segment is accompanied by a sample selection from an narrative comprehension lesson developed for an upper elementary class. (Reading "The Man on Top" in Appendix A will provide you with the background to analyze the upcoming lesson).

Each of the learning activities within the body of the lesson are crafted to emphasize a single instruction goal. Explicit directions and clearly spelled out relationships help students to understand the purpose of these activities. Students engage in the making of meaning through verbal practice at placing the content of a lesson into a visual structure. The utility of student prior knowledge is an important consideration for each lesson. In addition, the teacher highlights technical vocabulary terms (i.e., plot, setting, character) and students are expected to use the terms to reflect upon the meaning of the text.

OPENING - The lesson opens with a clear statement of the lesson's goal to the students. The teacher previews the new content to be learned, introduces the visual structure to be used for organizing the content, and models the process students will follow to fit the content into the structure. If this explanation is stated explicitly, the students should now know precisely what they are going to do and why. Students will be motivated to perform if the lesson is described in an interesting

manner.

In the accompanying sample lesson, the content is introduced as the characters, setting, and plot of a narrative about mountain climbing. The structure is identified as a web, a semantic mapping technique (Johnson & Pearson, 1984) that is presumably familiar to the students. The process of organizing the content into the structure is described as finding specific information from the story and grouping similar chunks together. The motivation to perform is triggered by the initial discussion on the mountain climbing. Note that students are also informed that the goal of the lesson is to use these chunks of information to better understand the story.

OPENING EXAMPLE - Has anyone here ever climbed a mountain? As you probably know, the art of mountain climbing is not dependent on physical strength alone. You've probably all heard stories of people with physical handicaps climbing mountains. It takes a certain kind of character to make it to the top of a big mountain. "The Man on Top" is a narrative about climbing the toughest mountain in the world and the types of people who attempt to scale these heights.

All narratives are made up of certain building blocks, and this story is no exception. The building blocks of a narrative are characters, setting, and plot. <List and define these terms on the board.> As we read the story be on the lookout for details that tell you who the characters are and what they are like, where and when the story takes place, and the important events that occur. After you have finished reading we'll create a web to organize all this information on the story's building blocks. Then, we'll see how knowing information about characters, setting, and plot can help you to better understand a story.

MIDDLE - The middle of the lesson is activity oriented. Here the content of the lesson is organized into a visual structure. This visual structure is usually created on the blackboard in front of the class. Whenever applicable, student prior knowledge

is linked with the new content information in this structure. Students are guided in this activity by the design of the specific structure and through verbal interaction with the teacher (and one another). The students verbally follow the process of organizing the content into the visual structure. This oral interaction may take place as an entire class or in small discussion groups. Students learn a great deal from one another when the group's sum total knowledge on a topic can be accessed, and students contribute more to class discussion when given a visual structure to help focus their thoughts.

A key point to make about the middle of the lesson is this: the students, not the teacher, are doing most of the mental work! They are thinking, talking about their thoughts, and organizing these thoughts into a coherent picture. The teacher serves as guide to the students' developing thought processes.

In the example, the teacher sets up a basic web structure on the board and elicits two categories of information from the students. First, information about character, setting, and plot details is provided by the students. Second, inferences are made about specific information that is not provided in the text but is necessary to a complete understanding of the three narrative elements. The web, when completed, gives the students an organized picture of the kinds of information they need to glean from a story.

MIDDLE EXAMPLE - **<Students read the story. When they are finished reading, create a web on the blackboard as you elicit information from the students about characters, setting, and**

plot.> Let's begin with the characters. Who can name one of the characters in this story? Is this person a major or minor character. <Explain the distinction and continue until all characters are accounted for.> On the board I have listed some words that could describe the feelings the characters have in this narrative. <Read and define these words.> See if you can match these feeling words with the characters from the story. Can you come up with other descriptive words of your own for these characters? <Probe for rationale.>

Now, let's turn to the setting. It may not say directly when and where this story takes place, but there are a lot of clues to help us make an educated guess. Does anyone want to speculate what part of the world is the setting for this narrative? What clues did you use to make this guess? What is the name of the town where the story begins? Do the main characters spend the whole story in this town? Where do they end up by the end of the story? Do you think the author who wrote this story wanted the readers to think it took place in the past, present, or future? Why do you think so? About how long did the plot take to unfold from beginning to end? What clues from the story did you use to make your decision?

Okay, now we'll look at the plot of this narrative? Help me to list the important events in the order they occurred in the story. What do you think was the first important event? Why was it important? <Etc.>

CLOSING - In the closing of a lesson the content is reviewed and the learning goals are summarized. The teacher probes for the students' mastery of the lesson content, their awareness of the learning process, and the name and design of the structure they have used to organize the content. A variety of assessment opportunities are open to the teacher at this point, including the determination of students' capacity to make increasingly sophisticated connections among ideas presented in the content. Again, because the closing of a lesson is conducted orally, the students are led to verbally review the thinking process they have followed as well as the information they have internalized.

In many ways, the closing of a lesson mirrors its opening. In the opening the teacher explains the learning activity that is

about to take place to the students, and in the closing the students describe what they have learned to the teacher.

In the closing example, the teacher first probes for the technical word for story ("narrative") and then for the name of the visual structure ("a web"). Next, the students are asked to describe the components of the web, how they were organized, and the purpose of the lesson. Finally, the students' understanding of the story content is assessed.

CLOSING EXAMPLE - **What type of writing are we dealing with today? What structure did we use to organize the story? What are the building blocks of a narrative? What sorts of information do you look for when you want to describe the characters, setting, and plot? In the opening of this lesson, I told you that knowing all this information about the story would help you to understand it better. Let's find out if this is true! <Probe for the connections between character feelings and plot development. Assess students' understanding of the conclusion of the story.>**

FOLLOW-UP - The follow-up to a lesson can take many different forms. The teacher can assign written exercises to help students internalize the content, or this content can be extended and linked to upcoming material through further discussion. The visual structure used in the lesson can be used to organize a new body of knowledge, or the structure can be modified to accommodate new information the teacher wishes to add to the lesson. Alternately, activities can be designed that challenge students to independently follow a line of reasoning similar to the thinking process they employed during the middle of the lesson. Most follow-up activities are creative in nature, stress the development of writing skills, and tie the new information that has been acquired by the students into a larger body of

knowledge.

Three follow-up options are presented in this lesson example. The first choice emphasizes transfer of structure by asking students to analyze a new story by organizing its narrative components. The second choice focuses on a more in-depth exploration of either character, setting, or plot. The third choice challenges students to use their newly acquired system for character analysis to write an extension of the story. Obviously, the level of difficulty in the lesson follow-up is heavily dependent on the academic abilities of the students.

LESSON FOLLOW-UP - **(1) Have the students apply their knowledge of narrative building blocks to a new story.**
(2) Now that these basic narrative elements have been introduced, pick an appropriate story and teach one element in much greater detail.
(3) Have the students create an in-depth character analysis of the major characters and use this analysis to continue the story beyond its present conclusion. The writer's task is to shift the characters into an entirely new setting while attempting to keep the plot events consistent with identified character traits.

The READ lesson model is designed to exhibit three major strengths. First, it encourages explicitness in both language use and intention between teachers and students. Second, a stress on transfer of knowledge and skills is built into the lesson. Third, the stage is set for meaningful student communication rather than rote response.

Recommendations

Many teachers are prisoners of content. They have not been trained to make informed curriculum decisions, so they are forced to rely on teacher manuals and publishers to tell them what to do

with their students. In order for students to learn critical thinking skills, their teachers must first have the knowledge to think critically about curriculum development. The informed reading teacher can determine what information in a text is important to stress and how this information fits together coherently. She has the ability to choose appropriate methods for showing students these connections among the ideas in a text. She has the perspective to teach students the processes of critical thinking as well as a year's worth of content. Most importantly, the informed reading teacher can help students learn to transfer these developing processes from one learning situation to another.

The following recommendations are provided to assist informed teachers in creating "accelerated" readers in their classrooms. Each technique is based on the concepts of language and thinking development that underlie this paper. The recommendations are:

(1) the adoption of a coherent, consistent lesson plan for the purpose of giving and receiving explicit information;

(2) an emphasis on verbal interaction with ideas between teacher and students (and among students);

(3) the use of visual structures to show how the information in a text is linked to its central themes;

(4) the assimilation of technical terms (i.e., sequence, inference) into the student's vocabulary to enhance his descriptions of the thinking processes he is following;

(5) the use of a variety of reading materials to supplement the basal reader and provide clear models for skill instruction; (6) the reconceptualization of assessment as an ongoing opportunity for student diagnosis.

The kind of student change these recommendations promote will not happen overnight. The tools of a critical reader are the ability to find patterns of organization in a text, aptitude in following a process of thought, and the acquisition of a vocabulary that empowers the learner to reflect on his thoughts. Children acquire these skills gradually. Over time, the trained reader will strive for more precision in his descriptions, search for temporal relationships among events, learn to draw inferential conclusions based on literal evidence, and seek fallacies in the logic of formerly persuasive arguments. In summary, effective reading instruction teaches children to think critically.

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Appendix A

The Man on Top

By Eric Frank Russell

Who was the first man to reach the top of Nanda Urbat? Any school kid can tell you. *Toughest mountain in the world —26,318 feet, conquered finally by Geoffrey Barbank.*

I was forgotten. I was just the fellow who went along. The press gave Barbank the credit. He was the Man on Top, the Man on the Top of the World.

Only he wasn't, really. He knows that it's a lie. And that hurts.

A mountain, you know, is a quest, a mystery, a challenge to the spirit. Mallory, who died on Everest, knew that. But Barbank climbed Nanda Urbat simply to keep some other man from being first. Mysteries did not exist for him, and anyone who felt the sense of mystery was a fool. All men were fools to Barbank—or enemies.

I found that out the day I joined the expedition in Darjeeling.[1] "The town's in a sweat about some flea-bag Holy Man," he told me after lunch. "Let's go and look the old fraud over. Might have a bit of fun."

So the two of us walked down from the hotel, and, all the way, he boasted of his plans. I can still see his face, big, cold, rectangular, as he discussed the men who'd tried and failed. Of course they'd muffed it. You couldn't climb Nanda Urbat on the cheap. He'd do things differently. All his equipment was better than the best that the many others had had. Because he had designed it. Because it had cost a mint.

It made me angry. But I had come too far to be turned back. I let him talk.

We turned into the compound of a temple. There was a

[1]Darjeeling: a city and district in India located in the Himalayas.

quiet crowd there, squatting in the dust, and many monkeys. By a stone wall, under a huge umbrella, the Holy Man was seated on a woven mat. His long, white hair framed the strangest face I've ever seen—moon-round, unlined, perfectly symmetrical. His eyes were closed. Against the pale brown skin, his full lips curved upward like the horns of a Turkish bow. It was a statue's face, smiling a statue's smile, utterly serene.

The people seemed waiting for something. As we came through the crowd, no one spoke. But Barbank paid no heed. We halted up in front; and he talked on.

"What's more," he was saying, "I don't intend to bother with filthy Sherpa porters for the upper camps. Planes will drop the stuff."

That set me off. "The Sherpas are brave men," I told him, "and good mountaineers."

"Rot," he snapped. "They're beasts of burden." He pointed at the Holy Man. "There's a sample for you. Look at that smirk. Pleased as punch with his own hocus-pocus—dirt, his wretchedness, and all. They've made no progress since the Year One."

The Holy Man was scantily clothed, but he was clean; his loincloth was spotless white. "Perhaps," I answered, "they're trying for something else."

And slowly, then, the Holy Man looked up. He spoke to Barbank. "We are," he said.

I met his eyes—and suddenly the statue came alive. It was as though I had seen only the shell of his serenity; now I saw its source. I felt that it was born, not in any rejection of the world, but in a knowledge of every human agony and joy.

"Yes, we are trying," the Holy Man went on. His voice was beautiful and strangely accented, and there was humor in it, and irony. "But for something else? I do not think so. It is just that we are trying differently, we of the East and West —and sometimes one cannot succeed without the other." Pausing, he measured Barbank with those eyes. "That is why I can help you, if you will only let me."

Barbank's mouth curled. "He's heard the gossip down in the bazaar," he said to me. "Well, he won't get a penny out of me."

The smile danced. "Must I explain? A mountain is much more than rock and ice. No man can conquer the hardest mountain in the world. His conquest can be only of himself."

I shivered. That was what Mallory had said.

"You old humbug!" Barbank's laugh roared out. "Are you trying to tell me *you* can help me reach the top?"

"I think I'd put it differently," the Holy Man replied. "To be precise, I must say this. You never will achieve your heart's desire without my aid. "Your way of doing things is not quite good enough."

Barbank's neck reddened. "Oh, isn't it?" he snarled. "Well, come along and watch! I can use one more mangy[2] porter, I suppose."

The Holy Man raised his fragile hands. "Thank you—but no," he said gently.

Barbank spat in the dust. He pivoted and strode off, pushing roughly through the murmuring crowd.

It was then I decided that he must never be the Man on Top.

It is a long way from Darjeeling through Nepal to that dreadful mountain which the Tibetans call the Father of the Snows. The journey takes some weeks. We were eleven white men, but we soon found that we were not an expedition in the usual sense. We were Barbank's retainers,[3] walled off by his contempt.

The others left him pretty much alone. I couldn't. The Holy Man's prediction was my obsession now. At every chance, I talked to Barbank about the mysteries of the peak —the awful Snow Men, whom the Tibetans all swear exist, and the same dark, pulsating flying things which Smythe had seen high on haunted Everest. I said that, very possibly, Madsen, James, and Leverhome had reached the summit

[2]mangy (mān' jē).
[3]retainers: servants.

first—that he might get to be the Man on Top only to find some evidence they'd left.

By the time we reached our Base Camp on the Great East Glacier, I had become his enemy, who had to be put to shame. And there was only one way to do that. Though Kenningshaw and Lane were better men, he chose me for the assault. I had to be there, to see the Man on Top with my own eyes. That was fine. Because I could only stop Barbank from being first on top by being first myself.

We followed the traditional approach—up the Great East Glacier and the West Wall of the South Col[4]—up to Camp Five, nearly five miles above the sea. And, all the way, the mountain laughed at us. Against us it sent its cruel light cavalry—wind, mist, and snow—harassing us, keeping us aware of deadly forces held in reserve.

Yet, when we stood at Camp Five and watched the plane from India trying to drop the final camp higher than any man had camped before, the sky was clear. We watched the pilot try, and circle, and lose eight separate loads. The ninth remained; its grapples held.

"I bought two dozen, all identical," said Barbank. "I told you there's nothing these natives do that we can't do better."

He and I reached Camp Six, at over twenty-six thousand feet, late the next afternoon. We set the tent up, and weighted it with cylinders of oxygen. We ate supper out of self-heating cans and crawled into our sleeping bags.

We rose before dawn, and found that the fine weather still held. Barbank looked at the vast dark mountain, at the broad yellow band beneath the summit pyramid, at the depths of rock and glacial ice below.

"And so I won't succeed?" he taunted me. "*You bloody fool.*"

We went up. We mounted to the ridge, and stared down the awful precipice of the South Face. We worked toward the second step, where James and Leverhome were last seen. Small, keen lancets of wind thrust through our clothes down

to the flowing blood. The summit was hidden behind its plume of cloud.

Toward that plume we worked. Even with oxygen, it was agony. Up there, the air is thin. The thinness is in your flesh and bones, and in your brain. You move, and pause, and your whole attention is confined to the next move.

On such a mountain, physically, there can be no question over who shall lead. But morally there can. I can remember husbanding[5] my strength, giving Barbank a grudging minimum of aid. I can remember Barbank weakening, relinquishing the lead high on a summit slab. I can remember the look in Barbank's eyes.

The hours dragged. I moved. I ached. I forced myself to try to move again. Endlessly.

Then, without warning, the cloud-plume enfolded us. The Top of the World was fifty feet away. I knew that I could be the Man on Top, that I had Barbank where I wanted him. I stopped. I don't know why. I laughed and waved him on. He passed by, hating me.

He reached the summit edge. He turned his head. I could not see his lips, but I could feel their curl of triumph and their contempt. He turned again. And, as he turned, a single gust screamed past us and laid the summit bare. I saw its rock. I saw a wide depression packed with snow.

But in the center there was no snow at all, for it had melted. On his mat, scantily clothed and serene, the Holy Man was waiting. He smiled upon us with his statue's smile.

In that tone of pleased surprise with which one welcomes an unexpected guest, he spoke to Barbank. "How did you get up here?"

A strange sound came from Barbank's leather mask. Automatically, he pointed—at the harsh summit, the ridge, the slabs, the miles of rock and ice and snow.

The Holy Man lifted both his hands. His gesture was exquisite, polite, incredulous.

"You mean," he said, "you *walked?*"

Appendix B

Professional knowledge as professional power:

Project READ

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SUMMARY

Recent reform movements have placed increasing demands on schools to achieve both excellence and equity, to set high standards for students from all backgrounds. Literacy is a critical element in accomplishing these goals. More specifically, students must master thoughtful use of language, printed and spoken, for problem solving and communication. Minimum competency is not sufficient.

Project READ is a staff-development, school-enhancement collaboration designed to demonstrate that these goals are achievable. The Project is grounded in the notion that knowledgeable professionals can make informed and critical decisions about how to use available resources to meet the needs of a wide range of students. The conceptual foundations of READ build on principles of cognitive psychology and the rhetoric, with emphasis on coherence and explicitness in the design of curriculum and instruction.

The chapter describes the conditions that have allowed the collaboration to proceed, reviews the conceptual foundations and the pragmatics of the Project, and provides several "snapshots" of classrooms participating in READ.

INTRODUCTION

The public school is one of the most distinctive and significant social institutions in the United States. The years have seen cycles of enthusiasm and despair reflecting public sentiment about whether the schools are satisfying the needs of the moment. But never has the nation drawn back from the basic proposition that successful schools are vital to our country's wellbeing.

Pressure on the schools has increased in the last several years. One banner, waved with great vigor by its advocates, calls for higher standards and the attainment of excellence. The other banner, equity, is equally compelling, because of the nation's purported commitment to civil rights and because changes in national demographics make it critical to help every child realize his or her full potential, regardless of the circumstances of home or community.

Another facet to this tension appears in recent national assessments. The evidence is that many youngsters, after more than a decade of schooling, cannot read with fluency and comprehension sufficient for comprehension and communication in modern society (Rozel, 1985; Kirsch & Jungeblut, 1986). The deficiencies are not at the more basic levels of literacy (NAEP, 1981; Anderson, Hiebert, Scott, & Wilkinson, 1985), but in higher-level skills (Applebee & Langer, 1986).

Practitioners have received loads of advice about how to realize both excellence and equity: if recommendations were money, today's schools would be quite well off. The recommendations spring from many sources: state and federal mandates, citizen groups, experts of various types, and researchers. But more than pronouncements and reports is called for.

Since 1981, our group in the Stanford School of Education has worked with teachers and administrators from public schools throughout California to develop a staff-development, school-enhancement activity, Project READ. We think that collaboration is essential to realizing school improvement. The university team brings reflective knowledge to the partnership; it is the academy's custom to ruminate, to research, to reflect. The practitioners bring "front-line" knowledge, experiences grounded in the day-to-day rough-and-tumble of teaching and running a school. Both perspectives have strengths and weaknesses; joined together, the synthesis is more powerful than either standing alone.

The Project goal is to enhance student literacy. A central theme is the redefinition of literacy, not as the mundane minimum skill acquired by rote, but as competence in language as a tool for thinking and for communication, a high-level skill appropriate to survival in modern society. A second proposition is that all children can become successful readers and thinkers if instructed